



# Spaceport News

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John F. Kennedy Space Center

## Mission update STS-99

The Space Shuttle Endeavour was scheduled at press time to



launch from Pad 39A on Jan. 31 at 12:47 p.m., carrying six

astronauts on mission STS-99. The launch window extends for 2 hours and 2 minutes.

Known as the Shuttle Radar Topography Mission, STS-99 is devoted almost exclusively to collecting information that will yield unprecedented three-dimensional images of the Earth's surface.

STS-99 will register as the 97th Space Shuttle launch and the 14th flight of Endeavour. Landing at the end of the 11-day mission is planned for KSC's Shuttle Landing Facility on Feb. 11 at 4:55 p.m.

**Full story, page 3**

## Launching a commitment



Participants in the Space Summit at the KSC Visitor Complex included (from left) Senator Connie Mack, NASA Administrator Daniel Goldin, Florida Governor Jeb Bush, Senator Bob Graham and U.S. Representative Dave Weldon.

## Leaders pledge to keep Florida ahead in space race

The sights and sounds were enough to temporarily distract the attention of tourists from the grandeur of the Rocket Garden at the KSC Visitor Complex. The helicopter circling noisily above as a motorcade of security vehicles arrived with emergency lights pulsing made it clear that something out of the ordinary was taking place.

The swirl of activity reflected a momentous gathering in the nearby Early Space Exploration Center. The first Florida Space Summit on Jan. 14 brought together a formidable assembly of leaders from state and federal government, private industry, NASA and the Air Force in a discussion about Florida's future in space launches. "This meeting is unprecedented,"

NASA Administrator Daniel Goldin said early in the two-and-a-half-hour session. "I've been administrator for eight years now, and I've never been invited to a meeting like this."

Gathered along with Goldin in a large rectangle were Florida Governor Jeb Bush, Senators Bob

**(See Summit, Page 5)**

## Center flips the switch on improved phone system

A major milestone in the modernization of the KSC telephone system occurred when the center's oldest switch was taken out of service on Jan. 14.

Center Director Roy Bridges attended the historic event as the last No. 2 EAX GTE Central Office Switch operating in the United States was taken out of service. The switch was installed in November 1979 by GTE and had served 6,500 lines, primarily the Industrial area.

The switch operated on an outdated analog technology and did not have Caller ID, hence it could not provide emergency caller identification for 911 calls. The old switch was replaced by a state-of-the-art, trailer-mounted Siemens EWSD Central Office switch, located just west of the CD&SC.

The old switch was removed the following week and the permanent

**(See phones, page 5)**



John Kuhn of Installation Operations, right, demonstrates part of the outdated phone switching equipment to John Collins, left, project manager for Space Mark, Inc., KSC Director Roy Bridges and others.

# Stamp affixes Space Shuttle to a decade

The launching of the first Space Shuttle stuck in the consciousness of Americans, and as a result the image of an orbiter will be sticking to envelopes and cards throughout the country.

The United States Postal Service unveiled a new stamp commemorating the Space Shuttle Program on Jan. 12 during a first day of issue ceremony at the KSC Visitor Complex's Universe Theater. The stamp, showing a shuttle on the pad against a background of the American flag, is part of the Postal Service's "Celebrate the Century" series. It is one of 15 stamps dedicated to memorable images or events from the 1980s.

KSC Director Roy Bridges, who flew as pilot on the Space Shuttle Challenger for mission STS-51F in 1985, spoke at the unveiling ceremony.

"This is a particularly meaningful event to me," Bridges said. "It was almost a miracle to be able to take that first generation of reusable space vehicle up and return safely home."

The event also featured remarks from United States Representative Dave Weldon and NASA astronaut Richard Linnehan. During their talks, both paid particular attention to groups of children in the audience from Challenger Elementary School in Port St. John and Mims Elementary School.



Viki Brennan, Central Florida District Manager for the United States Postal Service, unveils a postage stamp on Jan. 12 commemorating the Space Shuttle program. The stamp, part of the "Celebrate the Century" series, is one of 15 symbols of memorable developments from the 1980s. Joining Brennan at the ceremony in the Visitor Complex's Universe Theater are, from left, NASA astronaut Richard Linnehan, United States Representative Dave Weldon, KSC Director Roy Bridges and Visitor Complex President Rick Abramson.

"Maybe 10 or 20 years from now we'll be here to unveil an International Space Station stamp," Weldon said. "At least, I hope we will be."

Viki Brennan, the Postal Service's Central Florida district manager, led the unveiling of the oversized image of the stamp. Immediately after the event, the new stamps went on sale in the lobby.

The Postal Service conducted a vote of its

patrons in determining the images for the 1980s series. The other subjects chosen to commemorate the decade: the musical "Cats," cable TV, the Vietnam Veterans Memorial, the San Francisco 49ers, the return of the Iran hostages, figure skating, compact discs, Cabbage Patch dolls, "The Cosby Show," the fall of the Berlin Wall, video games, the movie "E.T. The Extra-Terrestrial," personal computers and hip-hop culture.

## New transporters promise smooth ride for payloads

A pair of new transporters for NASA's payload canisters that carry spacecraft and International Space Station elements from payload facilities to and from the launch pads and the orbiter hangars arrived at KSC on Monday, Jan 17.

The transporters were shipped by barge from their manufacturer, KAMAG Transporttechnik, GmbH, of Ulm, Germany. Their arrival completes the process in a long-term analysis of the need for payload transporters to support the Space Shuttle program well into the new millennium.

Each payload canister transporter is 65 feet long, 22 feet wide, and has 24 tires divided between its two axles. The transporter travels 10 miles per hour unloaded, 5 miles

per hour when loaded and weighs up to 172,000 pounds when the canister with payloads rides atop it. The transporter can hold up to 500 gallons of diesel fuel.

Engineers and technicians are being trained on the operation and maintenance of the transporters, which will be "outfitted" to support Space Shuttle payload launch activities. The outfitting includes adding various subsystems to the transporters for monitoring the environment inside the canister during the payload moves.

"The addition of these new transporters will assure the long-term reliability for moving payload canisters," said Ira Kight, chief of ground system engineering at NASA. "We are also happy that



One of two new payload transporters for Kennedy Space Center sits on the dock at Port Canaveral after being shipped by barge from Germany.

two of four subsystems can be reinstalled on the new transporters, which will considerably decrease cost and turnaround time."

The outfitting activities require considerable advance planning and coordination around the Space Shuttle launch schedule. Only one

of the existing transporters can be taken out of service at one time, so that a capability can be maintained for transporting International Space Station hardware and other Shuttle payloads. First use of one of the new transporters is anticipated in mid-2000.



# STS-99 set to map mountains, molehills

The first mission of 2000 will take the Space Shuttle Endeavour 145 miles above the Earth in order to get a precise look at the planet's surface.

STS-99, the Shuttle Radar Topography Mission, features a crew of six. The mission is commanded by Kevin R. Kregel, who makes his fourth flight. Pilot Dominic Gorie (Cmdr., U.S. Navy) will take part in his second mission, having served the same role on STS-91, the final docking mission to the Russian space station Mir.

Mission Specialist Janet L. Kavandi, who has a doctorate in analytical chemistry, also is making her second trip to space. Fellow Mission Specialist Janice Voss is the mission's most experienced member with four previous flights.

The final two mission specialists reflect the international element of the space program. Mamoru Mohri, making his second flight, represents NASDA, the Japanese space agency. Gerhard P.J. Thiele will make his first space flight as a representative of the European Space Agency.

Endeavour will carry into space a sophisticated array of radar equipment, including two antennae and a 200-foot mast that will extend from the payload bay. The mission is expected to gather close to 1 trillion measurements of the Earth's topography.

The information will serve a variety of functions. Besides contributing to the production of more precise maps, the information could lead to improved water drainage modeling, more realistic flight simulators, better locations for cellular phone towers and enhanced navigation safety.

The 11-day mission is a partnership between NASA and the Department of Defense's National Imagery and Mapping Agency (NIMA), along with the German and Italian space agencies. The U.S. military, the primary customer of the data gathered during the mission, will use the 3-D pictures to help in mission planning and rehearsal, modeling and simulation.

Creating these 3-D images of the Earth's surface will require the first



The crew of STS-99 takes a break from recent Terminal Countdown Demonstration Test activities at the 167-foot level of the Fixed Service Structure on Launch Pad 39A. From left to right are Mission Specialist Janet Lynn Kavandi (Ph.D.), Commander Kevin Kregel, Mission Specialists Janice Voss (Ph.D.), Gerhard Thiele and Mamoru Mohri, and Pilot Dominic Gorie. The top of a solid rocket booster and the external tank are visible behind them.

on-orbit use of a technique called single-pass radar interferometry. Radar beams will be bounced off the surface and received by two antennae, both of the same type as used on STS-59 and STS-69. With one device mounted in the payload bay and the other at the end of the 60-meter mast, the difference in placement yields the 3-D effect of the measurements.

Deploying the mast, which is two-thirds as long as the International Space Station, will be an accomplishment in itself. The longest rigid structure ever flown in space will be stored like an accordion inside a canister attached to the side of the main antenna. A shuttle piloting technique known as the "flycast maneuver" will help keep the mast in a fixed position.

Radar imaging was used previously by NASA's uncrewed Magellan spacecraft to map the surface of Venus. Radar technology offers the advantage of being able to detect surfaces through clouds, which cover 40 percent of the Earth, and in darkness.



the supervision of Capt. George Hoggard of the KSC Fire Department (riding on front) during the crew's emergency egress training.

The crew will spend approximately 72 hours circling the Earth while conducting observations. During an expected sequence of about 143 consecutive orbits, Endeavour will map the planet's surface in segments that after processing are expected to be accurate to within 50 feet.

In order to maintain continuous observations, the crew will divide

into a pair of three-person teams for work shifts of 12 hours each day.

No spacewalks are planned during the mission. The crew, however, will be prepared for the possibility of as many as three spacewalks if parts of the radar system must be deployed or retracted manually.

Landing at KSC is scheduled for Feb. 11 at 4:55 p.m.



# McMonagle departs for industry position

Veteran astronaut and senior Space Shuttle manager Donald R. McMonagle departed NASA on Jan. 14 for a position in private industry.

McMonagle's duties at KSC as Shuttle manager of Launch Integration will be temporarily assumed by Bill Gerstenmaier, manager of Shuttle Program Integration at Johnson Space Center, until a permanent replacement is named.

"Don has given tremendous service to NASA and this country," said Ron Dittmore, Space Shuttle program manager. "His expertise, wisdom and contributions to the safe and successful exploration of space have been invaluable. He will be greatly missed."

During a farewell ceremony held at KSC on Jan. 12, McMonagle received mementos from Center Director Roy Bridges and other high-ranking KSC officials.

McMonagle has served at KSC as manager of Launch Integration for the Space Shuttle Program since

"Don has given tremendous service to NASA and this country."

— RON DITTMORE, SHUTTLE PROGRAM MANAGER

1997. His responsibilities included managing shuttle launch preparations, overseeing launch of the shuttle and ensuring the safe return of the shuttle to KSC following landings at remote locations. He also served as chairman of the Space Shuttle Mission Management Team for launch.

"The team that processes, launches and flies the Space Shuttle is composed of the most dedicated people with whom I have ever worked, and I have been deeply honored to count myself among them," McMonagle said. "I am leaving NASA with the firm belief that the Space Shuttle today is safer than it has ever been. And I'm confident that the shuttle team is



Don McMonagle, former Shuttle manager of Launch Integration, speaks with astronauts Janice Voss and Janice Kavandi during a farewell gathering.

more firmly committed to achieving excellence in their job now than ever before."

McMonagle was selected as an astronaut by NASA in June 1987 and has flown on three Space Shuttle missions, logging more than 605 hours in space. He flew as a mission specialist aboard Discovery on mission STS-39 in April 1991; as pilot of Endeavour on STS-54 in January 1993; and as

commander of the Atlantis crew on STS-66 in November 1994.

Before becoming the manager of Launch Integration, McMonagle was named in 1996 to establish a new Extravehicular Activity Project Office at NASA, which was responsible for managing the resources, planning and execution of space walks in support of the Space Shuttle and International Space Station.

## Employees of the year and January employees of the month



Employees of the year are, from left, Curtis Martin, Space Shuttle Program Launch Integration; Wanda Petty, Equal Opportunity Program Office; Kenneth Newton, Joint Performance Management Office; Karin Biega, Advanced Development and Shuttle Upgrades; Jim Lichtenthal, Business Innovation Group; Connie Wilcox, Procurement Office; Nathan Taylor, Checkout and Launch Control System Office; Mary Conklin, Expendable Launch Vehicles and Payload Carriers Program; Herb Peete, Installation Operations; Lisa Zuber, Information Office; Bill Johnson, Public Affairs; Cheryl Johnson, Administrative Office; Steve Brisbin, Biomedical Office; Rita Long, Financial Office; Geoffrey Swanson, Chief Counsel's Office; Alan Littlefield, Engineering Development; and Becky Thompson, Shuttle Processing. Not shown are Thomas Dwyer, Safety and Mission Assurance; Taya Facemyer, Logistics Operations; Robert Franco, Space Station and Shuttle Payloads; and John Gurecki, Space Station Hardware Integration Office.



January employees of the month are, back row from left, Mica Parenti, Logistics Operations; David Taylor, Advanced Development and Shuttle Upgrades; Dudley Cannon, Chief Counsel's Office; Joe Madden, Checkout and Launch Control System Office; Jim Black, Financial Office; and front row, from left, Shondrae Bain, Administrative Office; Becky Fasulo, Space Station and Shuttle Payloads; Laurette Brown, Installation Operations; and Jeanette Boogaerts, Safety and Mission Assurance. Not shown are Joyce Kelly, Engineering Development; Manny Cabrera, Shuttle Processing; and Darrell Thomas, Expendable Launch Vehicles and Payload Carriers.

## Summit ...

(Continued from Page 1)

Graham and Connie Mack, representative Dave Weldon, State University System Chancellor Adam Herbert, state representative Randy Ball, KSC Director Roy Bridges, 45th Space Wing Commander Brig. Gen. Donald Pettit and the leaders of aerospace companies Boeing and United Space Alliance, among others.

After opening remarks from the political leaders present, Bridges and Pettit offered a presentation on the present activities and future plans of KSC and the Air Force. They stressed the importance of the joint operations that began more than a year ago and gave a summary of the Spaceport Technology Center concept.

The heart of the discussion involved a series of questions that Bridges and Pettit used as a starting point for exploring the needs and expectations of all of government and industry.

Much of the discussion focused on Florida's growing competition for space launch business. Lieutenant Governor Frank Brogan seemed to sum up the concerns of others on the matter.

"Our simple geography doesn't give us the complete advantage we once had," Brogan said. "The

pieces of the puzzle are there. Now it's a matter of interlocking them to create the picture of space in Florida that we want to see."

Several speakers talked about the need for better coordination in efforts among the various local, state and national government entities and private companies involved in the space program.

Brogan, the designated lead for the governor's office on space issues, emphasized the state's commitment to securing funding for range upgrades and the space program in general.

Several speakers mentioned the need to create more involvement with state universities in the space program. Bridges said that one such opportunity will come about with the development of the Space Experiment Research and Processing Laboratory (SERPL).

The facility, scheduled for construction near the KSC Visitor Complex, will offer state-of-the-art equipment in a facility jointly operated by NASA and academia. Plans call for the facility to become the processing center for NASA's life-science missions.

Bridges told the gathered officials that SERPL is intended as the first stage in a 400-acre commerce park that could eventually turn the Visitor Complex into a 24-hour facility.



Senator Bob Graham, left, KSC Director Roy Bridges and Senator Connie Mack chat before the Space Summit at the Visitor Complex on Jan. 14.

Herbert said that the university system regards its future involvement with SERPL as a high priority, adding that the University of Florida will serve as lead institution for academic endeavors at the laboratory.

Goldin suggested the economic benefits Florida might derive from future efforts. He mentioned several possible developments that would enhance KSC's value — robotic colonies throughout the solar system, commercial space travel, human colonies on the moon and other planets and space stations in high orbit.

The NASA administrator emphasized, however, that all of those ideas depend upon dramatic increases in safety and reductions

in the cost of space flight.

Bush suggested that the summit become a regular event. Graham, co-organizer of the gathering along with Weldon, pushed the idea of establishing a steering committee of representatives from all of the key entities involved as a means of monitoring progress.

"There are a lot of things we can do to position ourselves to take advantage of the braintrust here," Weldon said.

"Far too many people just take space for granted because it has been here, it is here and they think it always will be here on the Space Coast," Brogan added. "We don't want to just hang on to (the space program), we want to grow it in Florida."

# NASA reverses downsizing, authorizes new hires at KSC

NASA is no longer in a mode of workforce subtraction.

Joseph Rothenberg, NASA's associate administrator for Space Flight, gave KSC the authority to begin new hiring in a memorandum to the Center's leadership last month. KSC has begun filling 75 positions to meet near-term staffing requirements.

In his memo, Rothenberg provided guidance on KSC workforce staffing and emphasized that downsizing at the Office of Space Flight (OSF) centers has been discontinued.

"The Office of Space Flight is faced with a pace of activity over the next three to five years, which exceeds anything we have seen since Apollo," Rothenberg wrote. "OSF has completed an assessment of Center staffing requirements as part of the Agency Core Competency Review. As a result of this review, as well as inputs from external reviews of the OSF

Center's workforce, we are authorizing immediate additional hiring to address workload requirements."

Rothenberg gave KSC officials a list of areas in which hiring for immediate needs has been authorized.

The primary areas are Shuttle Government Mandatory Inspection, Expendable Launch Vehicle Management, Shuttle Operations/Upgrades and International Space Station Program/Multi-Element Integration Testing.

Rothenberg's memo stated that the final disposition of staffing levels for fiscal year 2000 and fiscal year 2001 will be determined as part of the ongoing FY 2001 budget process.

"I want to thank you and your staff for all the support, long hours and extra effort given to providing the data necessary to understand and advocate the OSF workforce needs," Rothenberg added.

## Phones ...

(Continued from Page 1)

switch installed in the vacated space. The trailer switch will now be decommissioned. This is the first milestone in the replacement of the telephone infrastructure here at KSC.

There are 13 remote switching units being installed in major facilities at the center. These remotes will be networked to provide single-line service to KSC employees, making individual directory numbers possible.

One of the major end products of this upgrade is to provide the capability for Emergency 911 Caller ID to all the telephones on center. The E911 center will then, through its integrated database, be able to pinpoint the caller's exact location, for a more timely response and to better serve those who either don't know their location or can't communicate it in an emergency.

The infrastructure upgrade is scheduled to be finished in July. The completion of the change out of every telephone instrument will be phased in over a one-year period starting in July.



# Event shines light on skin cancer dangers

Skin cancer accounts for about one-half of the newly diagnosed cancers in America each year.

In an effort to increase employee awareness, NASA Administrator Dan Goldin is launching a Skin Cancer Prevention Program as one more health facet in the overall Agency Safety Initiative (ASI). The program focuses on proven techniques for reducing risks, early detection and health education about skin cancer.

KSC, lead center for

occupational health, will host the prevention program kick-off on Feb. 11, at 12:30 p.m. in the Mission Briefing Room of the Operations and Checkout Building (O&C).

"Since the majority of NASA sites are located in the Sunbelt, our employees have an increased risk of excessive and prolonged sun exposure," said Goldin. "We feel the (risk-reduction techniques) are a positive step in the fight to protect our employees from the

effects of ultraviolet rays."

The kick-off will include a special guest appearance and presentation by current astronaut Jeffrey Ashby, who lost a wife to skin cancer and knows first-hand about the damaging effects of the sun. Representatives from the Florida Chapter of the American Cancer Society and the American Academy of Dermatology will be present to answer questions concerning this issue.

All employees are welcome to

attend the kick-off to receive valuable information about protecting yourself and your family.

Program components include personal UV cards to quantify exposure, screenings, skin cancer education material and sunscreen and other appropriate protective measures.

For more information about the Skin Cancer Prevention Program or kick-off, please contact Dr. Dave Tipton at 867-6385.

## The eagles have landed



A pair of nesting bald eagles bask in the sunshine on a utility pole along Kennedy Parkway North, where they have been commonly seen in recent weeks. The birds' 11-foot-deep nest in a nearby pine tree has been home to one or more pairs of eagles for more than 25 years. It is one of a dozen eagle nests in the Merritt Island National Wildlife Refuge, which shares a boundary with Kennedy Space Center. Bald Eagles are listed as endangered in the U.S., except in five states where they are listed as threatened. Eagles arrive at KSC during late summer and leave for the north in late spring. They move to nest sites in October and November and lay one to three eggs, and the young fledge from February to April.

## African-American History Month

The month of February is designated each year as African-American History Month, a time to celebrate the achievements and contributions of African Americans to Kennedy Space Center, NASA and the nation.

The Office of the Chief Financial Officer is sponsoring KSC's monthlong celebration. The theme for this year's observance is "Heritage and Horizons: The African-American Legacy and the Challenges of the 21st Century."

A kick-off ceremony is scheduled for Feb. 3 at 9 a.m. in the KSC training auditorium.

The highlight of the observance is the African-American History Month luncheon on Feb. 16. The guest speaker will be Dr. Julian Earls, deputy director for operations at Glenn Research Center. The event begins at 11 a.m. in the Visitor Complex's Early Space

Exploration Conference Center. The admis-

sion of \$12 per person includes a luncheon buffet.

Tickets for the luncheon must be bought by Feb. 1. To order, contact: Wanda Petty, Headquarters room 2321, 867-2307; Terrasena Jones, HQ room 2276, 867-4622; Wanda Henderson, O&C room 3006A, 867-6389; Debbie Houston, O&C room 3018A, 867-6923; Barbara Lockley, SSPF room 3006, 867-6151; Mary Poitier, M502 room 1209B, 867-8281; or Chuck Baldwin, Logistics Facility room 1715B, 861-1160.

In addition, the KSC 10 O'Clock News will run Black History Facts throughout February.



John F. Kennedy Space Center

## Spaceport News

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